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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/622,485 | 07/21/2003 | Hartmut Wagner | 32140-189120 | 4982 |

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EXAMINER

SUKMAN, GABRIEL S

| ART UNIT | PAPER NUMBER |
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3641

DATE MAILED: 10/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/622,485

Applicant(s)

WAGNER

Examiner

Gabriel S. Sukman

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/13/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 3 and 8 are objected to because of the following informalities: in claim 3, the phrase "further including a stud is inserted" should be corrected for grammatical errors; in claim 8, the word "cicumferential" is misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase "especially" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claims 2-8 depend from claim 1 and are therefore rejected as being indefinite as well.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 3641

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,767,215 to Brown.

Regarding claim 1, Brown discloses a multi-ring hydraulic seal and apparatus for rifle barrels for use in a “technique which stimulates the stresses produced within the bore of a gun tube during the firing of a round of ammunition therein” (col. 1, lines 7-10), (autofrettage). The apparatus includes a mandrel-shaped insert with a first sealing device (cylindrical mandrel, 24, is sealed as shown in figures 2 and 4), the sealing device having a sealing packet disposed on a seat (as shown in figure 2) that is limited at one end by a threaded sleeve screwed onto the insert (“internally threaded cylindrical rifling pilot 34,” col. 4, lines 2-3). Brown discloses an annular intermediate part adjoining the sleeve and engaging the seal packet as the rear part of sleeve 34, shown in figure 4. The seal packet includes at least one O-ring (elastomeric element, 52) and is held by a shoulder of the insert adjacent the seat (curved end wall, 42). The packet of Brown also includes a leather ring (46), a bearing ring (steel ring, 44), and a high-pressure seal formed by two partial rings connected to each other by a conical contact surface (rings 58 and 62, with sloped face, 64) that are forced against the opposite surfaces when pressure is applied.

Claim 2 is anticipated by Brown as well since the elastomeric element, 52, is naturally elastic and is held by the shoulder of the insert (with the ring, 44, as an intermediary) and the leather ring (46) is supported against the O-ring (52, with the

Art Unit: 3641

Teflon ring, 48, as an intermediary) and is directly supported against the bearing ring, 44.

Claim 5 is anticipated by Brown because the high-pressure seal made of two partial rings comprises steel (ring 58 is taught to be made of steel, col. 4, line 35).

Claim 7 is anticipated by Brown since Brown discloses a second sealing device at the opposite end of the mandrel-shaped insert as being an "O-ring unit" (col. 3, lines 58-61), which essentially, although possibly not completely, corresponds in design to the first sealing device.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown.

With regard to claim 4, Brown discloses the use of an elastomeric element but does not explicitly state that the element is made of rubber. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use rubber as the elastomeric element since one of ordinary skill in the art would immediately recognize rubber as the one of the first possibilities for an elastomeric element due to its prevalence, abundance, and wide usage in the field. Further, typical

Art Unit: 3641

O-rings are indeed made of rubber and Brown makes mention of the use of O-rings as conventional (col. 3, line 61) and it therefore would be only natural to use rubber in the element 52 of the sealing packet.

As to claim 6, Brown discloses the use of leather rings but does not explicitly disclose that the leather is cowhide leather. However, the use of cowhide leather in all or at least most typical situations where leather is used is old and well known in the art and it would have been obvious to one having ordinary skill in the art at the time the invention was made to use cowhide leather as claimed because of the associated commonality with the use of cowhide.

Allowable Subject Matter

Claims 3 and 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not disclose or suggest the combination that would teach an autofrettage device as claimed in which a stud engages the threaded sleeve via threads that run opposite to threads on the other side of the sleeve, which are engaged by the mandrel-shaped insert; nor does the prior art teach the device as claimed in which the mandrel-shaped insert has spaced annular depressions in its circumferential surface.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,177,990 to Isgen

U.S. Patent No. 4,848,777 to Zollo et al.

U.S. Patent No. 3,009,721 to Newton

U.S. Patent No. 1,725,836 to Solberg

U.S. Patent No. 1,553,824 to Langenberg

Japanese Patent No. 63-6271A to Konno et al.

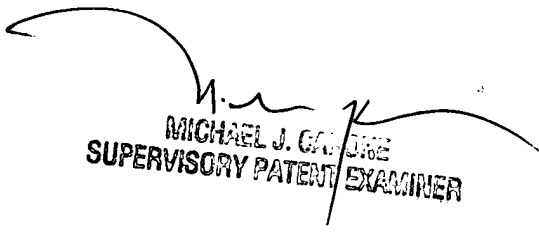
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gabriel S. Sukman whose telephone number is (703) 308-8508. The examiner can normally be reached on M-F, 8:30-6:00, every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Carone can be reached on (703) 306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3641

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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MICHAEL J. GARONE
SUPERVISORY PATENT EXAMINER